

Application No. 10/001,573
Paper Dated June 29, 2005
Attorney Docket No. 128346.31801

AMENDMENTS TO THE CLAIMS

1-22. (Cancelled)

23. (Previously Presented) A method for improving the toughness of a CBN product made by a high temperature/high pressure (HP/HT) process, which comprises the steps of:

forming a blend of an oxygen getter and a CBN product-forming feedstock, wherein the oxygen getter comprises at least one material selected from the group consisting of nitrides of Al, Si, and Ti, carbides of Al, Si, and Ti, and mixtures thereof; and

subjecting said blend to a CBN high temperature/high pressure (HP/HT) process for forming a CBN product, wherein said HP/HT process is conducted in the presence of a catalyst; and

wherein the amount of oxygen getter in said blend is sufficient to improve the toughness of said CBN product.

24-25. (Cancelled)

26. (Previously Presented) The method of claim 23, wherein the oxygen getter comprises between about 0.005 and 0.5 weight-% of the blend.

27. (Cancelled)

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28. (Previously Presented) The method of claim 23, wherein the HP/HT process is conducted in the presence of a catalyst devoid of oxygen content.

29-31. (Cancelled)

32. (Previously Presented) The method of claim 23, wherein the CBN product has an oxygen content of less than about 300 ppm.

33. (Previously Presented) The method of claim 23, wherein the oxygen getter further comprises at least one of elemental titanium, aluminum, and silicon.

34. (Currently Amended) The method of claim 23, wherein the portion of titanium, aluminum, and silicon in the oxygen getter comprises up to 0.24 between about 0.005 and 0.5 weight-% of the blend.

35. (Cancelled)

36. (Previously Presented) A method for improving the toughness of a CBN product made by a high temperature/high pressure (HP/HT) process, which comprises the steps of:

forming a blend of an oxygen getter and a CBN product-forming feedstock, wherein the oxygen getter comprises at least one material selected from the group consisting of nitrides of Al, Si, and Ti, carbides of Al, Si, and Ti, and mixtures thereof; and

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subjecting said blend to a CBN high temperature/high pressure (HP/HT) process for forming a CBN product, wherein said HP/HT process is conducted in the presence of a catalyst;

wherein the oxygen getter comprises between about 0.005 and 0.5 weight-% of the blend.

37. (Previously Presented) The method of claim 36 wherein the method yields a CBN product having an oxygen content of less than about 300 ppm.

38. (Currently Amended) The method of claim 36, wherein the oxygen getter further comprises ~~at least one of~~ elemental titanium, aluminum, ~~and or~~ silicon.

39. (Currently Amended) The method of claim 38, wherein the ~~at least one of~~ elemental titanium, aluminum ~~and or~~ silicon comprises ~~up to 0.24~~ between about 0.005 and 0.5 weight-% of the blend.

40. (Currently Amended) The method of claim 36 wherein the portion of titanium, aluminum, and silicon in the oxygen getter comprises ~~up to 0.24~~ between about 0.005 and 0.5 weight-% of the blend.

41. (Cancelled)